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RAW SEQUENCE LISTING

DATE: 11/20/2002

PATENT APPLICATION: US/09/636,259B

TIME: 11:38:46

Input Set : A:\10738-44.ST25.txt

Output Set: N:\CRF4\11192002\I636259B.raw

3 <110> APPLICANT: Small, Kersten
 4 Liggett, Stephen
 6 <120> TITLE OF INVENTION: Alpha-2A-Adrenergic Receptor Polymorphisms
 8 <130> FILE REFERENCE: 10738-44
 10 <140> CURRENT APPLICATION NUMBER: 09/636,259B
 11 <141> CURRENT FILING DATE: 2000-08-10
 13 <160> NUMBER OF SEQ ID NOS: 26
 15 <170> SOFTWARE: PatentIn version 3.1
 17 <210> SEQ ID NO: 1
 18 <211> LENGTH: 1170
 19 <212> TYPE: DNA
 20 <213> ORGANISM: Homo sapiens
 22 <400> SEQUENCE: 1

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27	ttcggcaagg	cttgggtgca	gatctacctg	gcgctcgacg	tgctcttctg	cacgtcgtcc	180
29	atcgtgcacc	tgtgcgccat	cagcctggac	cgctactggt	ccatcacaca	ggccatcgag	240
31	tacaacctga	agcgcacgcc	gcgcccgcac	aaggccatca	tcatcacctg	gtgggtcatc	300
33	tcggccgtca	tctccttccc	gccgctcacc	tccatcgaga	agaaggcgcg	cgccggcgcc	360
35	ccgcagccgg	ccgagccgcg	ctgcgagatc	aacgaccaga	agtggtagct	catctcgtcg	420
37	tgcacgggct	ccttcttctc	tccctgcctc	atcatgatcc	tggtctacgt	gcgcatctac	480
39	cagatcgcca	agcgtcgcac	ccgcgtgcca	cccagccgcc	ggggtccgga	cgccgtcgcc	540
41	gcgcccgcgg	ggggcaccga	gcgcaggccc	aacggtctgg	gcccgcgagc	cagcgcgggc	600
43	ccggggggcg	cagaggccga	accgctgccc	acccagctca	acggcgcccc	tggcgagccc	660
45	gcgcccggcg	ggccgcgcga	caccgacgcg	ctggacctgg	aggagagctc	gtcttccgac	720
47	cacgccgagc	ggcctccagg	gccccgcaga	cccgagcgcg	gtccccgggg	caaaggcaag	780
49	gcccgcgagc	gccaggtgaa	gccggggcgac	agcctgcgcg	ggcgcgggcc	gggggagacg	840
51	gggatcgagg	cgccggctgc	agggccgggg	gaggagcgcg	tcggggctgc	caaggcgctc	900
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55	ggagtgttcg	tggtgtgctg	gttccccctt	ttcttcacct	acacgctcac	ggccgtcggg	1020
57	tgctccgtgc	cacgcacgct	cttcaaattc	ttcttctggt	tcggctactg	caacagctcg	1080
59	ttgaaccggg	tcatctacac	catcttcaac	cacgatttcc	gccgcgcctt	caagaagatc	1140
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72	ggcgggcgcc	gggccacccc	ttactccctg	caggtgacgc	tgacgctggt	gtgcctggcc	120
74	ggcctgctca	tgctgctcac	cgtgttcggc	aacgtgctcg	tcatcatcgc	cgtgttcacg	180
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78	ctggtggcca	cgctcgtcat	ccctttctcg	ctggccaacg	aggtcatggg	ctactggtac	300

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82 atcgtgcacc tgtgcgcat cagcctggac cgctactggt ccatcacaca ggccatcgag 420
84 tacaacctga agcgacagcc gcgccgcatc aaggccatca tcatcacctg gtgggtcatc 480
86 tcggccgtca tctccttccc gccgctcatc tccatcgaga agaagggcgg cggcggcggc 540
88 ccgcagccgg ccgagccggc ctgcgagatc aacgaccaga agtgggtacgt catctcgtcg 600
90 tgcacggtct ccttcttctg tccctgcctc atcatgatcc tgggtctacgt gcgcatctac 660
92 cagatcgcca agcgtcgcac ccgctgcca cccagccgcc ggggtccgga cgcgctcgcc 720
94 gcgcgcggcg ggggcaccga gcgcaggccc aagggtctgg gccccgagcg cagcgcgggc 780
96 ccggggggcg cagaggccga accgctgccc acccagctca acggcgcccc tggcgagccc 840
98 gcgcgcggcg gggcgcgcca caccgacgcg ctggacctgg aggagagctc gtcttccgac 900
100 cagcccgagc ggcctccagg gccccgcaga cccgagcgcg gtccccgggg caaaggcaag 960
102 gcccgagcga gccaggtgaa gccgggagc agcctgccgc ggcgcggggc gggggcgagc 1020
104 gggatcgga cgcgggtgc agggccgggg gaggagcgcg tcggggctgc caaggcgtcg 1080
106 cgctggcgcg ggcggcagaa ccgcgagaag cgcttcacgt tcgtgctggc cgtgggtcatc 1140
108 ggagtgttcg tgggtgtgctg gttccccttc ttcttcacct acacgctcac ggccgtcggg 1200
110 tgctccgtgc cagcacgct cttcaaattc ttcttctggt tcggctactg caacagctcg 1260
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114 ctctgtcggg gggacaggaa gcggatcgtg 1350
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118 <211> LENGTH: 450
119 <212> TYPE: PRT
120 <213> ORGANISM: Homo sapiens
122 <400> SEQUENCE: 3
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125 1 5 10 15
128 Glu Ala Pro Gly Gly Gly Ala Arg Ala Thr Pro Tyr Ser Leu Gln Val
129 20 25 30
132 Thr Leu Thr Leu Val Cys Leu Ala Gly Leu Leu Met Leu Leu Thr Val
133 35 40 45
136 Phe Gly Asn Val Leu Val Ile Ile Ala Val Phe Thr Ser Arg Ala Leu
137 50 55 60
140 Lys Ala Pro Gln Asn Leu Phe Leu Val Ser Leu Ala Ser Ala Asp Ile
141 65 70 75 80
144 Leu Val Ala Thr Leu Val Ile Pro Phe Ser Leu Ala Asn Glu Val Met
145 85 90 95
148 Gly Tyr Trp Tyr Phe Gly Lys Ala Trp Cys Glu Ile Tyr Leu Ala Leu
149 100 105 110
152 Asp Val Leu Phe Cys Thr Ser Ser Ile Val His Leu Cys Ala Ile Ser
153 115 120 125
156 Leu Asp Arg Tyr Trp Ser Ile Thr Gln Ala Ile Glu Tyr Asn Leu Lys
157 130 135 140
160 Arg Thr Pro Arg Arg Ile Lys Ala Ile Ile Ile Thr Val Trp Val Ile
161 145 150 155 160
164 Ser Ala Val Ile Ser Phe Pro Pro Leu Ile Ser Ile Glu Lys Lys Gly
165 165 170 175
168 Gly Gly Gly Gly Pro Gln Pro Ala Glu Pro Arg Cys Glu Ile Asn Asp
169 180 185 190
172 Gln Lys Trp Tyr Val Ile Ser Ser Cys Ile Gly Ser Phe Phe Ala Pro
173 195 200 205

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176 Cys Leu Ile Met Ile Leu Val Tyr Val Arg Ile Tyr Gln Ile Ala Lys
177      210                      215                      220
180 Arg Arg Thr Arg Val Pro Pro Ser Arg Arg Gly Pro Asp Ala Val Ala
181 225                      230                      235                      240
184 Ala Pro Pro Gly Gly Thr Glu Arg Arg Pro Asn Gly Leu Gly Pro Glu
185                      245                      250                      255
188 Arg Ser Ala Gly Pro Gly Gly Ala Glu Ala Glu Pro Leu Pro Thr Gln
189                      260                      265                      270
192 Leu Asn Gly Ala Pro Gly Glu Pro Ala Pro Ala Gly Pro Arg Asp Thr
193                      275                      280                      285
196 Asp Ala Leu Asp Leu Glu Glu Ser Ser Ser Ser Asp His Ala Glu Arg
197      290                      295                      300
200 Pro Pro Gly Pro Arg Arg Pro Glu Arg Gly Pro Arg Gly Lys Gly Lys
201 305                      310                      315                      320
204 Ala Arg Ala Ser Gln Val Lys Pro Gly Asp Ser Leu Pro Arg Arg Gly
205                      325                      330                      335
208 Pro Gly Ala Thr Gly Ile Gly Thr Pro Ala Ala Gly Pro Gly Glu Glu
209                      340                      345                      350
212 Arg Val Gly Ala Ala Lys Ala Ser Arg Trp Arg Gly Arg Gln Asn Arg
213                      355                      360                      365
216 Glu Lys Arg Phe Thr Phe Val Leu Ala Val Val Ile Gly Val Phe Val
217      370                      375                      380
220 Val Cys Trp Phe Pro Phe Phe Phe Thr Tyr Thr Leu Thr Ala Val Gly
221 385                      390                      395                      400
224 Cys Ser Val Pro Arg Thr Leu Phe Lys Phe Phe Phe Trp Phe Gly Tyr
225                      405                      410                      415
228 Cys Asn Ser Ser Leu Asn Pro Val Ile Tyr Thr Ile Phe Asn His Asp
229                      420                      425                      430
232 Phe Arg Arg Ala Phe Lys Lys Ile Leu Cys Arg Gly Asp Arg Lys Arg
233                      435                      440                      445
236 Ile Val
237      450
240 <210> SEQ ID NO: 4
241 <211> LENGTH: 450
242 <212> TYPE: PRT
243 <213> ORGANISM: Homo sapiens
245 <400> SEQUENCE: 4
247 Met Gly Ser Leu Gln Pro Asp Ala Gly Asn Ala Ser Trp Asn Gly Thr
248 1                      5                      10                      15
251 Glu Ala Pro Gly Gly Gly Ala Arg Ala Thr Pro Tyr Ser Leu Gln Val
252                      20                      25                      30
255 Thr Leu Thr Leu Val Cys Leu Ala Gly Leu Leu Met Leu Leu Thr Val
256                      35                      40                      45
259 Phe Gly Asn Val Leu Val Ile Ile Ala Val Phe Thr Ser Arg Ala Leu
260      50                      55                      60
263 Lys Ala Pro Gln Asn Leu Phe Leu Val Ser Leu Ala Ser Ala Asp Ile
264 65                      70                      75                      80
267 Leu Val Ala Thr Leu Val Ile Pro Phe Ser Leu Ala Asn Glu Val Met
268                      85                      90                      95

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271 Gly Tyr Trp Tyr Phe Gly Lys Ala Trp Cys Glu Ile Tyr Leu Ala Leu
272      100      105      110
275 Asp Val Leu Phe Cys Thr Ser Ser Ile Val His Leu Cys Ala Ile Ser
276      115      120      125
279 Leu Asp Arg Tyr Trp Ser Ile Thr Gln Ala Ile Glu Tyr Asn Leu Lys
280      130      135      140
283 Arg Thr Pro Arg Arg Ile Lys Ala Ile Ile Ile Thr Val Trp Val Ile
284 145      150      155      160
287 Ser Ala Val Ile Ser Phe Pro Pro Leu Ile Ser Ile Glu Lys Lys Gly
288      165      170      175
291 Gly Gly Gly Gly Pro Gln Pro Ala Glu Pro Arg Cys Glu Ile Asn Asp
292      180      185      190
295 Gln Lys Trp Tyr Val Ile Ser Ser Cys Ile Gly Ser Phe Phe Ala Pro
296      195      200      205
299 Cys Leu Ile Met Ile Leu Val Tyr Val Arg Ile Tyr Gln Ile Ala Lys
300      210      215      220
303 Arg Arg Thr Arg Val Pro Pro Ser Arg Arg Gly Pro Asp Ala Val Ala
304 225      230      235      240
307 Ala Pro Pro Gly Gly Thr Glu Arg Arg Pro Lys Gly Leu Gly Pro Glu
308      245      250      255
311 Arg Ser Ala Gly Pro Gly Gly Ala Glu Ala Glu Pro Leu Pro Thr Gln
312      260      265      270
315 Leu Asn Gly Ala Pro Gly Glu Pro Ala Pro Ala Gly Pro Arg Asp Thr
316      275      280      285
319 Asp Ala Leu Asp Leu Glu Glu Ser Ser Ser Ser Asp His Ala Glu Arg
320      290      295      300
323 Pro Pro Gly Pro Arg Arg Pro Glu Arg Gly Pro Arg Gly Lys Gly Lys
324 305      310      315      320
327 Ala Arg Ala Ser Gln Val Lys Pro Gly Asp Ser Leu Pro Arg Arg Gly
328      325      330      335
331 Pro Gly Ala Thr Gly Ile Gly Thr Pro Ala Ala Gly Pro Gly Glu Glu
332      340      345      350
335 Arg Val Gly Ala Ala Lys Ala Ser Arg Trp Arg Gly Arg Gln Asn Arg
336      355      360      365
339 Glu Lys Arg Phe Thr Phe Val Leu Ala Val Val Ile Gly Val Phe Val
340      370      375      380
343 Val Cys Trp Phe Pro Phe Phe Phe Thr Tyr Thr Leu Thr Ala Val Gly
344 385      390      395      400
347 Cys Ser Val Pro Arg Thr Leu Phe Lys Phe Phe Phe Trp Phe Gly Tyr
348      405      410      415
351 Cys Asn Ser Ser Leu Asn Pro Val Ile Tyr Thr Ile Phe Asn His Asp
352      420      425      430
355 Phe Arg Arg Ala Phe Lys Lys Ile Leu Cys Arg Gly Asp Arg Lys Arg
356      435      440      445
359 Ile Val
360      450
363 <210> SEQ ID NO: 5
364 <211> LENGTH: 22
365 <212> TYPE: DNA

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366 <213> ORGANISM: Homo sapiens
368 <400> SEQUENCE: 5
369 tttaaccatc ggctctccct ac 22
372 <210> SEQ ID NO: 6
373 <211> LENGTH: 23
374 <212> TYPE: DNA
375 <213> ORGANISM: Homo sapiens
377 <400> SEQUENCE: 6
378 gagacaccag gaagaggttt tgg 23
381 <210> SEQ ID NO: 7
382 <211> LENGTH: 20
383 <212> TYPE: DNA
384 <213> ORGANISM: Homo sapiens
386 <400> SEQUENCE: 7
387 tcgtcatcat cgccgtgttc 20
390 <210> SEQ ID NO: 8
391 <211> LENGTH: 23
392 <212> TYPE: DNA
393 <213> ORGANISM: Homo sapiens
395 <400> SEQUENCE: 8
396 cgtaccactt ctggtcgttg atc 23
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400 <211> LENGTH: 24
401 <212> TYPE: DNA
402 <213> ORGANISM: Homo sapiens
404 <400> SEQUENCE: 9
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409 <211> LENGTH: 23
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411 <213> ORGANISM: Homo sapiens
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418 <211> LENGTH: 22
419 <212> TYPE: DNA
420 <213> ORGANISM: Homo sapiens
422 <400> SEQUENCE: 11
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427 <211> LENGTH: 23
428 <212> TYPE: DNA
429 <213> ORGANISM: Homo sapiens
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436 <211> LENGTH: 23
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438 <213> ORGANISM: Homo sapiens

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• RAW SEQUENCE LISTING ERROR SUMMARY DATE: 11/20/2002
PATENT APPLICATION: US/09/636,259B TIME: 11:38:47

Input Set : A:\10738-44.ST25.txt
Output Set: N:\CRF4\11192002\I636259B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:19; N Pos. 7



#7

CRF Problem Report

The Scientific and Technical Information Center (STIC) experienced a problem when processing the following computer readable form (CRF):

Application Serial Number: 09/636,259
Filing Date: 8/10/2000
Date Processed by STIC: 2/7/2002

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FEB 20 2002

STIC Contact: Mark Spencer, 703-308-4212

TECH CENTER 1600/2900

Nature of Problem:

The CRF (was):

- ☒ (circle one) Damaged or Unreadable (for Unreadable, see attached)
☐ Blank (no files on CRF) (see attached)
☐ Empty file (filename present, but no bytes in file) (see attached)
☐ Virus-infected. Virus name: _____ The STIC will not process the CRF.
☐ Not saved in ASCII text
☐ Sequence Listing was embedded in the file. According to Sequence Rules, submitted file should **only** be the Sequence Listing.
☐ Did not contain a Sequence Listing. (see attached sample)
☐ Other: _____

**PLEASE USE THE CHECKER VERSION 3.1 PROGRAM TO REDUCE ERRORS.
SEE BELOW FOR ADDRESS:**

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>) , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service , or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002